

III. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of synthesizing layout patterns, comprising the steps of:
 embodying Walsh patterns in a set of Walsh pattern matrices;
 processing at least one from the set of Walsh pattern matrices to form a set of test matrices, in which a set of combinatorial indices for n choose k matrices are determined, wherein n represents the number of matrices in the set of Walsh pattern matrices, k is the number of matrices in a group of processed matrices, and k is selected as large as possible given a set of computational constraints; and
 mapping the set of test matrices to a test pattern set.
2. (Original) The method of claim 1, wherein the set of Walsh pattern matrices are generated using an N th order Hadamard matrix, wherein N dictates the size of each matrix.
3. (Original) The method of claim 1, wherein the processing step utilizes a Boolean operation.
4. (Original) The method of claim 3, wherein the Boolean operation utilizes at least one logical operation selected from the group consisting of: a logical or, logical nor, logical and, and logical nand.

5. – 6. Cancelled.

7. (Original) The method of claim 1, wherein the mapping step maps matrix entries to tiles in a minimum space, minimum width grid, wherein each tile is assigned a value of either level on or level off.

8. (Original) The method of claim 7, wherein the mapping step adjusts spacing of tiles when a transition from on to off, or off to on is detected.

9. (Original) The method of claim 1, comprising the further step of pruning the pattern set based on a predetermined set of rules.

10. – 20. (Canceled).